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# “Rural America Is ‘On The Front’”: Rural Civil Defense In The Midwest And Northwest During The Cold War

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“Rural America Is ‘On The Front’”:  
Rural Civil Defense In The Midwest And Northwest During The Cold War

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A 1957 Federal Civil Defense Administration (FCDA) pamphlet entitled “Rural Family Defense” opened by stressing to farmers the importance of their responsibility to the country during the Cold War. “If YOUR farm and family are NOT endangered by enemy attack, you must keep on producing food, fibre, dairy products, and other output essential to winning the war. The Nation’s survival then will depend on how well you prepare now.”<sup>1</sup> This focus on ensuring that American farmers kept an ample supply of food and agricultural products on hand was a common theme for civil defense agencies such as the FCDA and other governmental agencies, like the U.S. Department of Agriculture (USDA), and Federal Extension Service (FES) throughout the Cold War. Besides encouraging rural Americans to keep the nation’s food supply well stocked, rural civil defense policies encouraged rural Americans to be willing to host potential urban evacuees as well as to build and stock their a fallout shelter for their family and their livestock.

Over the past thirty years, many historians have researched and written about Cold War civil defense. While historians like Laura McEnaney, Paul Boyer, Guy Oakes, and Tracy C. Davis, have all looked at impact that civil defense had on Americans during the Cold War, these historians have only looked at the ways that these policies affected the majority of Americans who lived in urban, industrial, or suburban settings. Historians such as Boyer and Davis have researched on the psychological affects that civil defense measures had on American society during the Cold War. Others, like McEnaney and Oakes, have argued that family fallout shelters increasingly militarized the American

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<sup>1</sup> Federal Civil Defense Administration, *Rural Family Defense* (Battle Creek, Michigan: U.S. Government Printing Office, 1957), 1.

family during the era, by promoting a military like structure to family shelters and preparedness plans.<sup>2</sup>

Yet, while many historians have researched the affects that civil defense had on Americans during the Cold War, little historical inquiry has been spent on the impact that these policies had on rural families. Only one historian, Jenny Barker Devine, has looked at the impact of Cold War civil defense measures on farm and rural families. While Devine's study is the first of its kind, more research is needed on rural civil defense. Devine's study provides an important overview of rural civil defense and views about the new advances in nuclear technology. However, there has been no further research on the ways that these policies were interpreted by federal, state, and county governments or the ways that individual farm families viewed the policies of evacuation and fallout shelters.

With little secondary material on rural civil and defense, and none that approach the subject on a regional or community level, many of the sources that have been incorporated in this paper come from previously untapped sources. These sources include the Rural Civil Defense records from the Extension Service Records held at the Oregon State University Archives and newspaper articles from a regional agricultural newspaper in the Northwest, the *Capital Press*. Both of these sources have provided many valuable views towards rural civil defense and the ways that rural Northwesterners interpreted these policies.

The tension between the United States and Soviet Union that created and maintained the Cold War ran from near the end of the 1940s through the start of the

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<sup>2</sup> For more on civil defense during the Cold War see: Paul Boyer, *By the Bomb's Early Light: American Thought and Culture at the Dawn of the Atomic Age* (Chapel Hill: University of North Carolina Press, 1994); Tracy C. Davis, *Stages of Emergency: Cold War Nuclear Civil Defense* (Durham, NC: Duke University Press, 2007); Laura McEnaney, *Civil Defense Begins at Home: Militarization Meets Everyday Life in the Fifties* (Princeton, NJ: Princeton University Press, 2000); and Guy Oakes, *The Imaginary War: Civil Defense and American Cold War Culture* (New York: Oxford University Press, 1994).

1990s. While the Cold War lasted forty years, the scope of this paper will cover from 1950 to 1970, during the height of the civil defense rhetoric in the United States. After the late 1960s and 1970s, the rhetoric behind civil defense measures started to decrease with low popular and political support. During these twenty years, however, national and international events such as the successful test of the Soviet Union's Atomic Bomb and both countries development of a more deadly and horrific Hydrogen Bomb, kept the idea of civil defense in the minds of American civilians and government officials who moved the policies onto the public. International political events, like the Bay of Pigs and the Cuban Missile Crisis, also added to the sense of fear of an Atomic attack as many Americans viewed the possibility of an Atomic or Hydrogen Bomb attack from the Soviets as a real possibility.

Circumstances within different regions in the United States also generated to the use of civil defense measures. Military bases, nuclear testing sites, and large cities all made a region vulnerable to an attack. In the Midwest, large military bases like Offutt Air Force Base and the Strategic Air Command (SAC), both located in Nebraska, added to the list of the region's likely targets. In the West, nuclear testing sites like Hanford Engineering Works in Southeastern Washington added to the threat that Westerns felt from the possibility of a nuclear attack. With variations between different regions in the nation, civil defense measures in the United States lay in a hierarchical structure. The federal government created the nation's main civil defense policies, while state and county governments attempted to follow national guidelines and policies.

At the national level, federal agencies like the FCDA, the USDA, and the FES, provided the rhetoric that state and county governments were to incorporate in their state

and community. At the state level, regional differences added to the ways that states responded to the national policies.<sup>3</sup> In the West, the presence of nuclear testing sites like Hanford, added to the level of response that Western states gave towards civil defense. Likewise, the presence of military bases like Offutt Air Force Base and SAC in the Midwest also affected the level of response that Midwestern states gave towards civil defense. Finally, at the county and individual level, civil defense policies were incorporated with varying levels of support. Between 1950 and 1970, rural Americans in the Midwest and Northwest, had to cope with a financial, logistical, and moral burden that resulted from civil defense policies that favored urban and industrial Americans.

### **Federal Views Towards Rural Americans and Civil Defense**

While the majority of Americans did not live in rural areas during the second half of the twentieth century, federal, state, and county governments promoted rural Americans to be more involved in civil defense measures that the United States enacted during the Cold War than non-rural Americans.<sup>4</sup> After the Soviet Union successfully tested an Atomic Bomb in August 1949, the United States was no longer the only nation with the capability to wreak massive havoc with a single bomb. Civil defense measures enacted during the Cold War attempted to directly quell the fears that arose from a theoretical Soviet attack. Evacuation routes designed to move Americans out of urban and other high-risk areas out to rural and low-risk regions became one of the primary

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<sup>3</sup> For the purposes of this paper, the Northwest incorporates the states of Washington, Oregon, and Idaho; the Midwest includes the states of Nebraska, Kansas, and Iowa.

<sup>4</sup> Throughout this paper, 'rural' will follow the definition used by the USDA and the Federal Extension Service that defined "Rural areas...as agricultural communities and towns of 10,000 or less." From "Civil Defense Education Programs in Oregon", Extension Service Records, Special Collections & Archives Research Center, Oregon State University Libraries, Box 73 "Rural Civil Defense 1962-1964"

civil defense measures during the early Cold War. These plans often made rural regions the endpoints for the urban evacuees. According to *Rural Family Defense*, rural Americans were to be in “charge of reception centers for evacuees, have positions of responsibility and authority regarding feeding, shelter, sanitation facilities, first aid, welfare, billeting in homes and in farm facilities.” However, the pamphlet gave little information to farm families on the ways that they were suppose to pay for these centers and the good required to stock them or the amount of compensation that the federal government would pass on to these families after the crisis was over. The pamphlet also ignored the logistical burden that rural Americans received of finding all of the supplies that they would need or the space to house urban evacuees.<sup>5</sup>

Like evacuation plans that often assumed rural Americans would be ready and willing to provide for the vast number of urban evacuees, the government’s policy toward fallout shelters also placed an unfair burden on rural Americans. In urban and industrial regions, public fallout shelters provided an effective way for the government to provide a sense of security and protection in the event of an attack. In rural areas, however, these public shelters were ineffective with a small and spread out population. In these regions, the government promoted private shelters to keep farm families and other rural Americans, livestock, and crops protected from nuclear fallout. These private shelters moved the expense of building and stocking the shelter from the government to rural Americans. Private shelters also placed an ethical burden on rural Americans who have traditionally been viewed as the ‘moral backbone’ of the nation by promoting virtue, a

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<sup>5</sup> Federal Civil Defense Administration, *Rural Family Defense*, 1.

hard work ethic, and traditional family values.<sup>6</sup> Besides being responsible for their family's safety during a hypothetical attack, farm families were also responsible for ensuring the safety of their livestock and crops from nuclear fallout.

### **Nuclear Threat in the Northwest: Hanford Nuclear Reservation**

Despite a lower population in the Northwest and Midwest, these regions were still vulnerable to nuclear attack. Military bases in the Midwest like Offutt Air Force Base and the SAC in Nebraska and nuclear testing sites across the Western United States added to the possibility of attack in these regions. While rural regions included small and spread out populations, the vast spread of fallout that would have occurred after an attack also added to the threat that farmers had from an Atomic attack. According to Bruce Hevly and John M. Findlay, the American West seemed like the perfect place for the establishment of nuclear testing sites such as Hanford in Southeastern Washington. Hevly and Findlay argue it was fitting that workers in the American West helped develop and test nuclear technology during the Cold War, since both the West and nuclear power have “generally been a realm of dramatic hopes and fears, a place often likened to hell or to heaven.”<sup>7</sup>

The federal government also saw the possibility that the West generated by viewing the region as ‘relatively empty, and they valued that undeveloped space for its apparent capacity to buffer people from the dangers associated with making and testing

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<sup>6</sup> Jenny Barker Devine, "Mightier than Missiles: The Rhetoric of Civil Defense for Rural American Families, 1950-1970.," *Agricultural History* 80, no. 4 (Autumn 2006), 415.

<sup>7</sup> Bruce William Hevly and John M. Findlay, "The Atomic West: Region and Nation, 1942-1992," in *The Atomic West*, ed. Bruce William Hevly and John M. Findlay (Seattle, WA: University of Washington Press, 1998), 4.



nuclear weapons and storing hazardous wastes,” according to Hevly and Findlay.<sup>8</sup> An optimistic view of opportunity in the American West has also been extended toward its inhabitants. Images of the hardworking, rugged, and virtuous pioneer have often been bestowed upon Westerners. In the 1957 thirty-minute CBS documentary on Portland Oregon’s evacuation plans, entitled “The Day Called ‘X,’” actor Glenn Ford introduces Oregonians as being “friendly, and rugged in the tradition of the Oregon Trail.”<sup>9</sup> However, these ‘friendly and rugged’ Westerners also had to deal with large nuclear testing sites that interrupted these rural and ‘empty’ landscapes.

Peter Goin has called these regions where nuclear testing sites moved on to rural landscapes “nuclear landscapes” that are “landscapes of fear.” One of these ‘nuclear landscapes’ is the 570 square mile Hanford Engineering Works - later renamed the Hanford Nuclear Reservation- in Southeastern Washington. However, before the federal government could begin construction at the Hanford site in 1943, the roughly 1,200 people who lived in the small farming communities of Hanford and White Bluffs needed to relocate away from the site.<sup>10</sup> Michael D’Antonio notes that while the region was too dry and arid to grow many crops, the Hanford and White Bluffs farmers had orchards, planted winter wheat and let cattle graze on nearby ranges.<sup>11</sup>

According to Michele Stenehjem Gerber, the news of the site’s selection came as a surprise to local residents. During a mass meeting held in Richmond, local residents were quick to ask the representatives of the Army Corps of Engineers why the

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<sup>8</sup> Hevly and Findlay, 4.

<sup>9</sup> *The Day Called ‘X’* Directed by Harry Rasky. Produced by Harry Rasky. Performed by Glenn Ford and The People of The City of Portland. Columbia Broadcasting Services, 1957. [archive.org/details/DayCalle1955\\_2](http://archive.org/details/DayCalle1955_2) ; [http://archive.org/details/DayCalle1955\\_2](http://archive.org/details/DayCalle1955_2).

<sup>10</sup> Peter Goin, *Nuclear Landscapes* (Baltimore: Johns Hopkins University Press, 1991), xix, 3-4.

<sup>11</sup> Michael D’Antonio, *Atomic Harvest: Hanford and The Lethal Toll of America's Nuclear Arsenal* (New York: Crown Publishers, 1993), 12.

government wanted the land that was too arid and difficult to use. However, the Corps of Engineers were reluctant to let slip the purpose behind the site's selection. Colonel Franklin T. Matthias told the local farmers who were being moved off their land that "If I told you what the government is doing, I'd be court-martialed tomorrow."<sup>12</sup> Within months, the region drastically changed from rural farming communities to boasting a population of nearly 51,000 people as the U.S. Army Corps of Engineers established the construction site. The region continued to grow as construction workers boosted the population to over 95,000.<sup>13</sup>

This rapid change in the nature of local communities directly affected the surrounding towns around Hanford that ballooned after the site was established. As a result from the influx of scientists and others who were involved with the nuclear site, the surrounding Tri-Cities of Richmond, Pasco, and Kennewick quickly grew. By the end of WWII, a federal edict restricted people who were not operating personnel at Hanford from residing in the town; the town quickly grew to boast a population of 13,000. By 1949, another 10,000 moved into Richland. While the federal government restricted who could live in Richland, the surround towns of Pasco and Kennewick also underwent a population boom, by 1949, 65,000 people called the region home. In less than ten years, one of the government's main reasons for choosing the rural and isolated region for an Atomic testing site became moot. The 'isolated' region grew from a small population of around 1200 persons to a sizeable population of over 65,000.<sup>14</sup>

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<sup>12</sup> Michele Stenehjem Gerber, *On the Home Front: The Cold War Legacy of the Hanford Nuclear Site* (Lincoln: University of Nebraska Press, 1992), 22-23.

<sup>13</sup> Goin, 4-5.

<sup>14</sup> Gerber, 55- 56.

The rapid change that occurred in Southeast Washington after Hanford was established also had an effect on local farm families in the region. Besides displacing the rural families who had previously lived around the Hanford site, the site's presence and the expansion of the Tri-Cities further stressed the local food supply. The former towns of Hanford and White Bluffs had been well known for their fruit orchards. However, because of the possible radioactive hazards that the Hanford site caused, farm families abandoned the orchards, and later cut the trees down, leaving fields of stumps behind.<sup>15</sup>

### **Rural Civil Defense and Evacuation Plans:**

#### **National Evacuation Plans**

While only a few Americans lived in rural areas during the second half of the twentieth century, the production of agricultural goods and protection of farm families and other rural Americans from nuclear fallout were still carefully considered by the federal agencies that established the nation's main civil defense measures during the Cold War. However, according to Devine, rural Americans were typically viewed as a "homogenous group" who were willing and able to take an active role in civil defense and "rarely in need of direct assistance from the federal government."<sup>16</sup> With this view in mind, rural regions were often the end points for evacuation routes from urban and other high-risk centers. A 1956 FCDA pamphlet, *Home Protection Exercises*, highlighted a view towards civil defense that was typical for the federal government during the 1950s. The pamphlet stated, "With the development of more powerful nuclear weapons,

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<sup>15</sup> Gerber, 58; Goin, 66-67.

<sup>16</sup> Devine, 421-422.

evacuation is the best defense against enemy attack. Evacuation depends upon having sufficient warning time; however, we cannot be sure that we will have sufficient warning time in all cases. Therefore, the family will need shelter. The better the shelter, the better the chance for survival.”<sup>17</sup>

The director of the FCDA, Val Peterson, also promoted a focus on evacuation plans. In an article in the September 1954 edition of the *Bulletin of the Atomic Scientists*, Peterson argued, “On the whole, it is foolish to talk any more about remaining in the city to duck and take cover.” Yet, not all Americans agreed with Peterson’s position. The article noted that while the *Bulletin* agreed with Peterson, he had not yet sold all local communities on evacuation plans. The *Bulletin* noted that Peterson “had to get across his ideas to the local communities many of which looked upon evacuation as utterly silly.”<sup>18</sup>

Director Peterson was a former governor of Nebraska, a state heavily dependent upon agriculture and farm families. Yet, Peterson and the federal government took a similar stance on the relationship between rural Americans and evacuation plans. In an interview with the *Bulletin of the Atomic Scientists*, in December of 1954 Peterson responded to a question that dealt with the legal responsibility that rural Americans had towards potential urban evacuees in the event that evacuation was required. Peterson told the interviewer that:

You have a higher responsibility to your fellow man than that which is written in the law. And I should also not be inclined to want to dispute my responsibility with the evacuees as they came into my front yard. But for those souls who do want to insist upon being legal about this, should an attack come upon this country, there would be legal authority that could be employed to require us to

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<sup>17</sup> Federal Civil Defense Administration, *A Family Action Program: Home Protection Exercises* (Washington D.C.: U.S. Government Printing Office, 1956), 8.

<sup>18</sup> “Planning an Effective Civilian Defense.” *Bulletin of the Atomic Scientists* 10, no. 7 (September 1954), 295.

perform what is actually our moral duty, if necessary. I trust that kind of action should never be necessary.<sup>19</sup>

Director Peterson was not the only source that told rural Americans they would be responsible for the care and protection of urban evacuees in the event that evacuation plans were set in motion. *Rural Family Defense* also played on the “moral duty” of rural Americans that Peterson stressed. In the 1957 pamphlet, farm and rural families were told that “Every rural family and community should be prepared to help care for evacuees from attacked areas. There is no way to determine in advance what rural areas will be safe to receive and care for these evacuated persons.” *Rural Family Defense* appealed to the assumed moral values of rural Americans in a second section, but also appealed to rural Americans self interest. “Rural families may be asked to help the people in attacked areas. Your own safety, the protection of your property, and the future of your income depend directly on a quick restoration of the economy between rural areas and cities.”<sup>20</sup>

Throughout the early and mid 1950s, Peterson and the FCDA held annual evacuation drills throughout the nation. Shortly after Peterson announced the evacuation plan as a means of national civil defense, several cities across the United States took part in evacuation drills as a part of “Operation Alert.” The purpose of “Operation Alert” was to show the feasibility of evacuation. While the national policy of evacuation went into effect, many states started to form their own evacuation plans. Peterson’s home state of Nebraska “published a three-volume contingency plan entitled the *State of Nebraska Operational Survival Plan*.” This contingency plan provided information on the

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<sup>19</sup> "An Interview with Governor Val Peterson. " *Bulletin of the Atomic Scientists* 10, no. 10 (December 1954), 377.

<sup>20</sup> Federal Civil Defense Administration, *Rural Family Defense*, 1.

evacuation routes for the 640,000 people who lived in the major cities in the state and the Offutt Air Force Base and the SAC.<sup>21</sup>

### **Evacuation Plans: “Utterly Silly”**

However, support for evacuation was not universal. Besides the local communities that considered Peterson’s evacuation plans as “utterly silly”, urban residents were also cautious of evacuation plans. City planners and highway commissioners were concerned if the road system would be able to handle a mass evacuation from an urban center.<sup>22</sup> McEnaney argues that major labor unions such as the American Federation of Labor and the Congress of Industrial Organizations were concerned with the effect that mass mobilization out of the cities would have on urban workers and their families. The unions’ response was that either the state or federal government provide for the workers “social and economic needs” in the event of dispersal to suburban or rural areas during evacuation.<sup>23</sup>

While rural Americans were fearful that their communities might quickly become refugee camps for urban Americans, complications of race and segregation also affected views towards evacuation from both rural and urban Americans. In 1954, Mobile Alabama held a mock evacuation drill. Dubbed “Operation Scat” by the FCDA, Scat tested the level of participation by the city’s black population in the drill. The FCDA hired ethnographers from the National Academy of Sciences (NAS) to monitor the drill.

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<sup>21</sup> Devine, 421.

<sup>22</sup> Devine, 423.

<sup>23</sup> Laura McEnaney, *Civil Defense Begins at Home: Militarization Meets Everyday Life in the Fifties* (Princeton, NJ: Princeton University Press, 2000), 132.

The report from the NAS noted that the low participation levels of Mobile's black citizens was most likely due to local and economic conditions rather than a desire by the African American community to ignore the drill. The NAS reported that many African Americans did not own radios or televisions and that a higher rate of illiteracy among the city's black population limited the effectiveness of the announcement of Scat by local print media.

With little prior warning of the drill, the NAS reported on a rumor that Operation Scat was not a test in the city, but that Scat's purpose was to bomb the city and to kill of "most of the Negroes so that they wouldn't have to go through with school de-segregation." During the drill, the NAS report also noted, few African Americans owned their own vehicles and were underserved by public transport, which represented a problem when evacuation plans called for the mass use of public transportation and private cars.<sup>24</sup> When asked by a NAS observer if whites would pick up African Americans during a real evacuation, a white police officer responded by first supporting segregation and then claimed that he would pick up a black man if he was not going to be picked up by anyone else. However, according to historian Tracy C. Davis, the "researcher got a clear impression from this that whites would always be given priority."<sup>25</sup> While the NAS reported that participation levels were low across Mobile's black neighborhoods, McEnaney argues that African American's low level of response could have been protesting "white police, racist local civil defense programs, or the travesty of self-help without the means to carry it out," and not civil defense in general.<sup>26</sup>

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<sup>24</sup> McEnaney, 138-140; Tracy C. Davis, *Stages of Emergency: Cold War Nuclear Civil Defense* (Durham, NC: Duke University Press, 2007), 167-170.

<sup>25</sup> Davis, 169.

<sup>26</sup> McEnaney, 140

Race relations during evacuation were again considered by the FCDA and other civil defense agencies even though, according to McEnaney, the “FCDA annual meetings and literature avoided direct conversation about the racial aspects of evacuation.”<sup>27</sup> A study done by John Hopkins examined evacuation routes from Washington D.C. into rural Virginia and Maryland. The study predicted that “social problems” would be likely to emerge “when predominantly Negro populations [are] evacuated to predominantly white areas.”<sup>28</sup> Even though the FCDA attempted to limit any frank discussion about race and evacuation, the topic sometimes seeped into the discussion. At the 1954 women’s conference held by the FCDA, Marjorie Husted, better known as Betty Crocker, promoted the sense of “community” to housewives while also advising them to prepare for “racial... invasions” if they lived in evacuation reception centers.<sup>29</sup>

Scientists and scholars unconnected with the FCDA and civil defense also looked at the possible racial tensions that could arise during evacuation. Francis R. Allen, a sociologist at Florida State University during the 1950s, noticed that race relations could be a potential problem for evacuation and that more research needed to be done on the issue. Allen questioned “what special problems relevant for civil defense are involved in dealing with Negroes in the South, immigrant populations in the Northeast, Middle West, or other cities, Pacific Coast residents, and the like? In short, what racial, nationality, and local-culture items not previously mentioned may be identified which would affect civil defense activities or problems?”<sup>30</sup> However, while Allen suggested that further research

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<sup>27</sup> McEnaney, 149.

<sup>28</sup> Devine, 423; McEnaney, 149.

<sup>29</sup> McEnaney, 149.

<sup>30</sup> Francis R. Allen, "Civil Defense and Regions: An Exploratory Study," *Social Forces* 36, no. 3 (March 1958), 246.



was needed on any potential race issues, the topic was left mostly untouched by several state civil defense agencies including in Oregon.

In the Northwest, questions over race relations were more likely to be between whites and migrant immigrant laborers than between whites and African Americans. Potential race issues were mostly ignored. The Oregon State University Rural Civil Defense program, sponsored by the Oregon State Cooperative Extension Service, wrote extensive biannual progress reports to the USDA on their activity in the state. Only one report from the six years that the program was active hints at race relations. The “Rural Civil Defense Progress Report January 1 – June 30, 1966” noted that, “One meeting was held in Jackson County Court where migrant housing design was discussed with the County Court, Associated Fruit Growers, and the country extension agent. The RCD engineer suggested possible designs of houses that would provide maximum fallout protection.”<sup>31</sup> Yet the report did not mention if the discussion about increasing fallout protection in housing for the mostly Latino migrant workers between the Jackson County Court, Fruit Growers and country extension agent went any further than a basic discussion that was quickly forgotten as the meeting progressed. However, the Rural Civil Defense program in Oregon was established near the end of 1962, well after most evacuation plans had been exchanged for public and private fallout shelters as the nation’s primary means of civil defense. Any issues that could have arisen between migrant workers and white farmers may have been more pronounced if the Rural Civil Defense program existed during the 1950s when evacuation plans were in their prime across the nation.

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<sup>31</sup>“Rural Civil Defense Progress Report January 1 – June 30, 1966”, Extension Service Records, Special Collections & Archives Research Center, Oregon State University Libraries, Box 73 “Rural Civil Defense Reports, Records, and Memorandas 1963-1976.”

## **Regional Evacuation Plans**

While the FCDA and USDA laid out the groundwork for rural civil defense, civil defense measures were also dependent upon the level of response that various states gave to civil defense. According to Allen, “it is apparent that the characteristics which make one area attractive as a target for military attack and another area unattractive vary over a nation, hence the nuclear threat is *not* the same in all parts of the United States.” Allen continued to argue that different regional factors such as large population centers, military bases and other factors all contributed to a region’s threat level.<sup>32</sup>

According to Allen, the number of people who lived in “critical target areas” of areas with “40,000 or more industrial employees” in the Midwest and Northwest were much lower than in the Northeast and Great Lakes region. While over 44 percent of the nation’s total population lived in critical target areas in the Northeast in 1953, only two and half percent of the nation’s population lived in a critical target area in Kansas, Nebraska, Colorado and Wyoming combined. The West Coast states of Washington, Oregon, California and Nevada included over 12.5 percent of the nation’s population who lived in a target area.<sup>33</sup>

### **Evacuation Plans in Nebraska and Oregon**

The state of Nebraska developed a comprehensive three-volume plan for evacuation during Val Peterson’s tenure as director of the FCDA. While Peterson was an

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<sup>32</sup> Allen, 239- 241.

<sup>33</sup> Allen, 241.

active proponent for evacuation, the resulting Nebraska Plan was slightly less enthusiastic. The Nebraska Plan acknowledged, “no effective shelter now exists in the target areas, and evacuation to safer areas is the only alternative remaining.” The evacuation routes that the state developed, routed people out of the five critical targets in Nebraska to rural regions across the state and into the neighboring states of Colorado, Kansas, and Iowa.<sup>34</sup> Despite its long length, the *State of Nebraska Operational Survival Plan* was, according to Devine, “broad and somewhat vague and rarely took the local conditions into account when selecting reception areas.”<sup>35</sup> State officials in charge of the *Survival Plan* expected rural residents in the state to ‘establish Mass Care Centers,’ where rural Nebraskans were tasked with “providing food, health care, and sanitation” for urban evacuees.”<sup>36</sup> Devine argues that state officials even left the “logistics of feeding, housing, and caring for refugees to town and county officials, offering little assistance to areas with sparse populations or few resources.”<sup>37</sup>

Like Nebraska, Oregon also created its own plan for evacuating people out of the state’s largest urban target, Portland, and assumed that rural Oregonians and the rest of the state would be willing and able to provide for evacuated Portlanders in the event of an attack. In 1955, the FCDA sponsored a test of Portland’s evacuation plan. Earning the name of “Operation Green Light” the mock evacuation plan called for the evacuation of six miles in the heart of the city with an expected 200,000 participants. The FCDA expected evacuees to leave the city in their vehicles and follow the green lights out of town. However, while the FCDA expected 200,000 people to participate in the drill, only

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<sup>34</sup> “Civil Defense,” NebraskaStudies.Org. Accessed May 04, 2013.  
[http://www.nebraskastudies.org/0900/frameset\\_reset.html?http://www.nebraskastudies.org/0900/stories/0901\\_0130.html](http://www.nebraskastudies.org/0900/frameset_reset.html?http://www.nebraskastudies.org/0900/stories/0901_0130.html)

<sup>35</sup> Devine, 421.

<sup>36</sup> Devine, 421.

<sup>37</sup> Devine, 421.

90,000-100,000 Portlanders participated in Operation Green Light, and were able to evacuate the city in thirty-four to forty minutes. According to the FCDA's *Annual Report for 1955*, "Approximately 90,000 persons in the metropolitan section moved out of the evacuation area of 970 blocks in an estimated 29,423 vehicles – while additional thousands walked out of the central district."<sup>38</sup> However, while the response was half of what the FCDA expected for Operation Green Light, Oregon's test of its evacuation plans caught the attention of a documentary crew from CBS. In December of 1957, CBS showed a thirty-minute film on the city's evacuation and civil defense plans, including the ways that tests like Operation Green Light would serve the city in the event it was attacked.

The CBS film, "*The Day Called 'X'*" was narrated by actor Glenn Ford and starred "The People of the City of Portland" as well as the city's mayor, civil defense director and other high ranking public officials.<sup>39</sup> *The Day Called 'X'* used Operation Green Light to show the ways that the city was prepared for evacuation, in the event a Hydrogen Bomb did head for the city. A radio announcer, during the film, made sure that evacuating drivers "remember there is a traffic plan for the evacuation of the city. All cars in the downtown area must follow the green lights, they will lead you out of the danger area by the quickest route."<sup>40</sup> While the film promoted civil defense preparedness, the depiction of the evacuation of the city and the establishment of the city's civil defense members in a large publicly funded civil defense bunker, like Green Light itself, exaggerated the effectiveness of evacuation.

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<sup>38</sup> *Annual Report for 1955*. Report. U.S. Government Printing Office, 1956, 28, 217.; Federal Civil Defense Administration. *Annual Report for Fiscal Year 1956*. Report. U.S. Government Printing Office, 1957, 74.' "The Day Called 'X'"; "Operation Greenlight Oregon's Answer to the H-Bomb." Cinema History from the Cold War! 2013. <http://www.atomictheater.com/operationgreenlight.htm>.

<sup>39</sup> "Civil Defense Filming Set," *Oregonian*, August 24, 1957, III:3; "*The Day Called 'X'*".

<sup>40</sup> "*The Day Called 'X'*".

Both Operation Green Light and “*The Day Called ‘X’*” showed a calm evacuation out of the city. During Green Light, a calm evacuation was more likely since only a fraction of the entire city participated in the test that the local media announced the test’s date and time beforehand. However, it is unlikely that the city would evacuate in a way similar to the way that Ford described in “*The Day Called ‘X’*” where he notes that “quietly, without panic, the city organizes, become mobile the best it can” after warning from an alert siren and CONELRAD—the precursor to the Emergency Broadcast System—radio report. Like many of the FCDA and USDA pamphlets, “*The Day Called ‘X’*” downplayed the effect of fallout and the blast from an Atomic or Hydrogen Bomb. Facing the threat of a Hydrogen Bomb blast, a city weather expert reported to the city’s civil defense director, Jack Lowe: “Let’s face facts gentlemen, if we have a blast on target, downtown Portland, it will be hours, and probably days before we can get back in.” However, if a Hydrogen Bomb did hit downtown Portland, there would be little of the city to return to for the evacuated Portlanders.<sup>41</sup>

The film also brings attention to a massive, nearly 19,000 square foot underground bunker that had been established to ensure that the city government would be able to continue functioning in the event of an attack. Located under Kelly Butte on the east side of the city, the Portland Disaster and Civil Defense Control Center was buried just six miles from downtown and allowed the city government and civil defense board a secure operational center without having to leave the metropolitan area. However, the nearly 19,000 square foot bunker was not an inexpensive project, costing the city and the people of Portland \$670,000 dollars. While approval for the shelter came after the passage of a 1952 levy, a good portion of the cost of the shelter did not come

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<sup>41</sup> “*The Day Called ‘X’*.”

directly out of the pockets of Portlanders. An article in the *Oregonian* from 1956 noted that, “Portland is getting something of a bargain in the control center. Of the estimated \$500,000 cost of the structure... half will be provided from federal funds. Of the additional \$100,000 for radio equipment associated with the control center... 50 per cent will come from federal funds and 25 per cent from state funds.”<sup>42</sup>

The main focus of “*The Day Called ‘X’*” was on the ways that Portland’s residents would evacuate and the reestablishment of the city government. The film gave little attention to the regions where evacuating Portlanders would go. The only mention that the film made was that the towns of Forest Grove and Mt. Angel had been established as emergency medical centers. The rest of the state was deemed a “support area” in the event of an evacuation of Portland.<sup>43</sup> While there was little emphasis on rural regions during the 1955 test and the CBS film, rural regions were mentioned on other tests of the state’s evacuation plans. During the 1958 Operation Alert, an article in the *Oregonian* reported, “mass feeding exercises are planned in Morrow, Polk and Gilliam Counties,” rural counties where evacuees would head if the evacuation were real.<sup>44</sup>

The impact that rural regions were to expect was also recorded in an article from a regional agriculture newspaper, the *Capital Press*. The *Capital Press* informed its rural readers after the yearly test of Operation Alert in 1955 that “in event of enemy attack, civil defense preparations in small towns and rural areas will be as important as those developed by target areas.” The article also included information from the state’s civil

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<sup>42</sup> "Disaster Hub Padded With Tons of Concrete," *Oregonian*, January 22, 1956, 19.; Nick Blackbourn. "Kelly Butte Civil Defense Center and Kelly Butte Natural Area." Oregon Encyclopedia - Oregon History and Culture. 2013. [http://www.oregonencyclopedia.org/entry/view/kelly\\_butte\\_civil\\_defense\\_center\\_and\\_kelly\\_butte\\_natural\\_area/](http://www.oregonencyclopedia.org/entry/view/kelly_butte_civil_defense_center_and_kelly_butte_natural_area/).

<sup>43</sup> “*The Day Called ‘X’*.”; Operation Greenlight Oregon’s Answer to the H-Bomb." Cinema History from the Cold War!; "Abby Made C.D. Refuge," *Oregonian*, May 6, 1957, 14.

<sup>44</sup> "Civil Defense Agencies Ready for 'Operation Alert' 1958," *Oregonian*, May 1, 1958, 10.

defense director, Arthur M. Sheets. Sheets acknowledged that rural Oregonians would have the ‘burden’ of caring for evacuating Portlanders. Nevertheless, he offered little advice on the ways that rural Oregonians were expected to care for them. Sheets remarked:

A city devastated by atomic attack could not recover through its own power... To small cities throughout the state would fall the burden of supplying police officers, fire fighting equipment, rescue units, first aid teams, emergency welfare teams and other resources. In addition, they would be on the receiving end of a large-scale evacuation. . . [Each] city can expect to double its population within hours after an attack.”<sup>45</sup>

The *Capital Press* article showed where evacuating Portlanders were expected to go in the event of an attack. Six different reception centers were established in small communities outside Portland in Scappoose, Carlton, Brooks, Estacada, Sandy, and Hood River. From each reception center, evacuees would be divvied up and placed in various counties across the state. The Estacada reception area was expected to receive around 64,000 people who, according to the *Capital Press*, “would be divided between 25,000 for Douglas County and 39,000 for Lane County.” The nearly 96,000 people at the reception center in Sandy would mostly be sent to counties in Southern Oregon. The article stated, “500 would go to Clackamas County, 5000 in Jefferson County, 20,000 in Deschutes County, 8000 in Crook County, 40,000 in Klamath County, and 38,000 in Jackson County.”<sup>46</sup>

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<sup>45</sup> "Civil Defense Exercise Shows Town and Rural Area Importance," *Capital Press* (Salem, Oregon), June 24, 1955, 3

<sup>46</sup> "Civil Defense Exercise Shows Town and Rural Area Importance," *Capital Press*.

## **Rural Civil Defense and Fallout Shelters:**

### **Transition from Evacuation to Fallout Shelters**

The feasibility of evacuation plans such as the one established in Oregon showed the ridiculousness of evacuation as a means of civil defense. While leaving high target areas was a relatively safe way of protecting a major city, the impact and little resources that were supplied to small towns and rural areas that were the end points of evacuation routes, would have prevented the plan from having the desired affect. As a result, public and private fallout shelters replaced evacuation as the nation's primary civil defense measure by the early 1960s. However, while the federal government, through the FCDA, promoted fallout shelters, the FCDA and USDA promoted private shelters to rural Americans. At the state level, state branches of the FES administered through land grant universities often became the main agency responsible for rural civil defense. In Oregon, the Oregon State University Cooperative Extension Service established a Rural Civil Defense program in December 1962, months after the Cuban Missile Crisis. The program continued through the decade, before it was cut as Oregon and the rest of the nation started to tire of civil defense by the early 1970s.

Some of the support for fallout shelters instead of evacuation plans came from a more widespread knowledge about the effects of fallout. After military tests in the South Pacific during the late 1950s showed that radioactive fallout could travel thousands of miles, civil defense became more of a concern in rural areas. By the end of 1960, forty-eight states had a rural civil defense program in place.<sup>47</sup> As more knowledge about radioactive fallout became more common and as a result of foreign policy crises, such as

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<sup>47</sup> Devine, 424.



the Bay of Pigs incident and the Cuban Missile Crisis, Congress began to support fallout shelters as a means of civil defense. By the end of 1961, Congress had set aside \$207 million to “identify, stock, and maintain buildings” as fallout shelters.<sup>48</sup> While public shelters would provide an effective way for highly populated cities and industrial areas, rural Americans were too isolated from one another for public shelters to provide an effective means of protection against fallout. In rural areas, federal and state governments stressed home fallout shelters as the only way to protect one’s family.<sup>49</sup>

### **The FCDA and Family Fallout Shelters**

Just like the nation’s policy towards evacuation, fallout shelters directly affected rural families just like the rest of the nation. McEnaney argues that civil defense became a “paramilitary program, situated between the priorities of the defense establishment and the cultural ideals of the postwar home front.”<sup>50</sup> The FCDA focused its civil defense plans around the family unit during the 1960s for several reasons. One of these reasons was that FCDA officials viewed the nuclear family as the home front version of the domino theory. They feared that if the family unit failed, that the rest of American society would quickly follow.<sup>51</sup> Another reason that the FCDA focused on the family unit for civil defense was that it took the financial responsibility away from the government and placed it on the family. Throughout the 1960s, the FCDA stressed family preparedness for an Atomic attack. As more families used their own money to create their own fallout

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<sup>48</sup> Devine, 424-25.

<sup>49</sup> Devine, 425.

<sup>50</sup> McEnaney, 5.

<sup>51</sup> McEnaney, 80.

shelter and gathered the necessary supplies to stock their shelter, there was less need for the federal government to build and stock public shelters.

Family preparedness appealed to the FCDA because the family unit would be less likely to fall apart if there was an attack.<sup>52</sup> It also provided a way for the FCDA to insert military style techniques into a civilian population. Civil Defense pamphlets like *Home Protection Exercises*, according to McEnaney, aimed “to transform families into well trained paramilitary units that required little or no government assistance.”<sup>53</sup> Pamphlets like *Home Protection Exercises* condensed family preparedness into eight “family action exercises.” These “exercises” consisted of “warning siren recognition, home shelter preparation, home firefighting and prevention, rescue techniques, food and water storage and first aid.”<sup>54</sup> All of these “action exercises” were still taught in civil defense literature over a decade later. The 1968 civil defense booklet, *In Time of Emergency* devotes a chapter to each of these “exercises.”<sup>55</sup>

Although it was published fifteen years after *Home Protection Exercises*, *In Time of Emergency* provided a detailed how-to guide on building a home fallout shelter and other preparedness exercises. *In Time of Emergency* provided information on how a family could prepare for a nuclear attack by building and stocking their own fallout shelter. The pamphlet recommended that four inches of concrete could be used to “provide fallout protection.”<sup>56</sup> If a family was unable to afford concrete, other materials acted as alternative sources of fallout protection. The booklets stated that “for

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<sup>52</sup> McEnaney, 78-79.

<sup>53</sup> McEnaney, 76.

<sup>54</sup> McEnaney, 76; Federal Civil Defense Administration, *A Family Action Program: Home Protection Exercises*

<sup>55</sup> Department of Defense and Office of Civil Defense, *In Time of Emergency* (Washington D.C.: U.S. Government Printing Office, 1968)

<sup>56</sup> Department Of Defense, and Office of Civil Defense, *In Time of Emergency*, 25.

comparative purposes, 4 inches of concrete” would be equal to: “5 to 6 inches of bricks... 7 inches of earth... 10 inches of water, 14 inches of books or magazines” and “18 inches of wood.”<sup>57</sup>

While the FCDA used military style techniques in preaching family preparedness, they also attempted to “domesticate” the Bomb to the civilian population. McEnaney states that civil defense officials promoted domestication of the Bomb not to numb “people to nuclear war, but detoxified their imaginings of it. Instead of macabre scenarios of death, domestication showcased people’s ability to *live* in a state of constant readiness.”<sup>58</sup> Civil defense literature broke down the global issue that the nuclear threat presented and broke it down into small issues that could be taken care of by the nuclear family. The threat of nuclear attack became just another routine household chore. The 1950 booklet, *Survival under Atomic Attack*, claimed that “radioactive particles act much the same as ordinary, everyday dust” which could be cleaned up with a rag.<sup>59</sup>

In an attempt to remove the psychological dangers that were present in a civil defense program that promoted preparedness for a nuclear attack, civil defense officials McEnaney argues, “cleaned up the language of nuclear warfare.” Nuclear euphemisms were often present in civil defense pamphlets. Nuclear fallout became common dust, “fallout shelters were ‘family,’ family-type,’ or ‘home’ shelters.”<sup>60</sup>

Another reason that domestication was widely used in civil defense was that it promoted the “traditional” family values found in the “nuclear” family: the breadwinning husband, the housewife, and two to three children. Domestication and family

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<sup>57</sup> Department Of Defense, and Office of Civil Defense, *In Time of Emergency*, 25.

<sup>58</sup> McEnaney, 73.

<sup>59</sup> McEnaney 74.,

<sup>60</sup> McEnaney, 74.

preparedness exercises promoted closer family relationships and units that would be able to survive if there was a nuclear attack.<sup>61</sup> Like the evacuation drills during the early and mid 1950s, volunteers and families tested the effects of an extended period in a fallout shelters. One of these tests, done by Princeton University, took the five-member Powner family into a shelter on the University's campus for a two-week stay. During the Powner's fourteen-day stay, the university's psychology professors monitored the unknowing Powner family with a microphone to record their emotional and mental states. Before and after the Powner's shelter stay their emotional and mental states were also recorded. After the family emerged from the shelter, each member of the Powner family was subjected to even more tests to see if any of the members had suffered any "ill effects."<sup>62</sup>

If there were any "ill effects", the Princeton professors did not report them to the government, and when the family spoke to the media after the tests were over, Mr. Powner, who spoke for the family, provided a glowing review of his family's experience. The Princeton professors did note that the middle child had, "suffered a bit, as evidenced by his moody withdrawal from family activities," however, he was "quickly brought out of this attitude by one administration of a tranquilizer."<sup>63</sup> After the Powners had emerged from the shelter, the one topic that Mr. Powner stressed was how the experience had created an "integration of the family" where Mr. Powner had a "new-found respect for the entire family."<sup>64</sup> Reviews like the ones that Mr. Powner generated for the media after their "secret" test was just the type that the FCDA was looking for – reviews that

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<sup>61</sup> McEnaney, 77.

<sup>62</sup> McEnaney, 68.

<sup>63</sup> McEnaney, 68.

<sup>64</sup> McEnaney, 68.

portrayed fallout shelters as a way to promote family relationships, values, and behaviors, while at the same time protecting Americans from radioactive fallout.<sup>65</sup>

This focus on the family and fallout shelters also extended towards rural families, where the whole family was often heavily involved in farm operations. Katherine Jellison notes that during the post-war era, farmwomen took a more active role in farm operations and helped with field work. According to Jellison “Wives, plus machinery, have taken the place of hired men or other outside help.” A report from the *Wallaces’ Farmer* from 1960, found that many farmwomen enjoyed working the fields. Roughly fifty percent of women who responded to the poll participated in field work. Of those who worked in the field, Jellison notes that “40 percent said they liked field work better than housework, another 32 percent said that they had no strong preference one way or another, and only 22 percent reported that they did not like doing field work.”<sup>66</sup>

However, while farmwomen moved into the fields and took a more active role in their family’s economic standing, not all rural people were supportive of the move. According to Jellison, men and especially male farm hands were often resistant to farmwomen spending more time in the fields and less time inside the home as the farm’s ‘homemaker’. Some farmwomen also supported their role as a homemaker and argued that farm work should continue to be a secondary role for rural women. A woman from Audubon County, Iowa argued that, “I know it’s a grand feeling to get out and operate a tractor that a child can handle. But it seems to me that it isn’t women’s work. A mother has her place in the home, taking care of her children... [But a] women should be ready

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<sup>65</sup> McEnaney, 69.

<sup>66</sup> Katherine Jellison, *Entitled to Power: Farm Women and Technology, 1913-1963* (Chapel Hill: University of North Carolina Press, 1993), 167-168.

and willing to run errands, get machinery repairs... [and] ...chase the hogs in case they get out.”<sup>67</sup>

### **Fallout Protection for Livestock and Crops**

While entire farm families were becoming more involved with the daily operations of the farm, civil defense authorities viewed the farm family as an essential part of civil defense. However, while non-rural families were encouraged to protect themselves, the FCDA and USDA instructed farm families to protect their livestock and crops as well as their family. Months after the Cuban Missile Crisis in 1962, the USDA produced two pamphlets designed to educate farm families about the ways that they could protect their livestock and crops from nuclear fallout. The pamphlets entitled, *Your Livestock Can Survive FALLOUT from NUCLEAR ATTACK* and *Soil, Crops and FALLOUT from NUCLEAR ATTACK* looked at ways that farm families could protect their livestock and crops from fallout and ensure that the nation’s food supply would remain functional during and after an attack.<sup>68</sup> The USDA’s pamphlet designed for livestock informed rural Americans that their livestock, like themselves, were vulnerable to fallout. “For animals, as for humans, shelter is the best protection against fallout... Shelter facilities should be kept in readiness, and an adequate supply of feed and water should be at hand.”<sup>69</sup> The USDA, like the FCDA also promoted the use of underground shelters for livestock. “A good animal shelter is a two-story, basement-type barn with a

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<sup>67</sup> Jellison, 164-165.

<sup>68</sup> In both pamphlets, “Fallout” and “Nuclear Attack” are in all caps, bringing attention to these words and the fear that they invoked.

<sup>69</sup> U.S. Department of Agriculture, *Your Livestock Can Survive Fallout from Nuclear Attack* (Washington D.C.: U.S. Government Printing Office, 1962), 3.

hay-filled loft.” The pamphlet claimed that the use of hay could “reduce radiation exposure as much as 80 percent.” Even a “good, tight, wooden barn” could reduce radiation exposure, the pamphlet argued by “about one-half.”<sup>70</sup>

*Your Livestock can Survive Fallout* also made sure that farmers knew how to protect their livestock feed and water from radiation. Like many of the FCDA pamphlets that downplayed the effects of fallout, the *Your Livestock can Survive Fallout* also compared fallout to dust. The USDA recommended that farmers cover exposed haystack with a tarp. This way, “the fallout will lodge on the tarpaulin and can be removed with it. The hay could be used immediately.”<sup>71</sup> Extra water supplies could also be protected from fallout if “covered with any material that will keep out dust.”<sup>72</sup>

Civil Defense officials placed extra emphasis on ensuring that dairy cows and poultry were protected in the event of an attack. According to *Your Livestock can Survive Fallout*, “milking cows should be kept confined and be given uncontaminated feed and water to prevent contaminating milk until local authorities tell you it is safe to release them.”<sup>73</sup> Likewise, *Your Livestock can Survive Fallout* also recommended that if farmers did not have enough feed and water protected from fallout that the limited amount of feed should be reserved for the milking cows. This way, the milk could be used by the farmer’s family for both its caloric and liquid value. As for the leftover livestock the USDA advised, “It would be much better to keep the other animals alive on contaminated feed and water than to let them die from starvation.”<sup>74</sup>

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<sup>70</sup>USDA, *Your Livestock Can Survive*, 3.

<sup>71</sup> USDA, *Your Livestock Can Survive*, 4.

<sup>72</sup> USDA, *Your Livestock Can Survive*, 4.

<sup>73</sup> USDA, *Your Livestock Can Survive*, 4.

<sup>74</sup> USDA, *Your Livestock Can Survive*, 6.

The USDA also viewed poultry as an important source of protein after an attack. The pamphlet claimed, “Poultry are more resistant to radiation exposure than are other species of livestock.” Poultry also benefited since they were often kept under some sort of cover and their feed was processed and kept under cover as well.<sup>75</sup> If farmers were unable to move their livestock under cover during an attack, the USDA recommended that they wash them “as soon as it is safe for you to stay outside for a limited time.” The USDA advised farmers to wear “protective clothing” during washing, even though the “removal of radioactive fallout from the hides of animals is difficult, and attempts may be ineffective in some cases.”<sup>76</sup>

In a separate pamphlet, *Soil Crops, and Fallout from Nuclear Attack*, the USDA again offered advice for farmers on the ways that they could reduce radiation exposure and recommended other types of crops that would be less affected by radiation. Even though the USDA published both pamphlets months apart, the Department’s advice to farmers in *Soil, Crops, and Fallout* advised farmers in a more scientific tone than in *Your Livestock can Survive Fallout*. Both pamphlets included a section on what radiation was, and the ways that farmers could protect their livestock and crops from radiation. *Soil, Crops, and Fallout*, however, goes into more depth about radiation and the different types of radiation. While in the *Your Livestock Can Survive*, the USDA is more concerned on making sure that farmers kept their livestock sheltered the best they could, in *Soil, Crops, and Fallout*, the USDA is especially concerned with the effect that a particular radioactive isotope, strontium 90, would have on soil and crops. According to the USDA, strontium 90 was especially dangerous because “strontium could contaminate soils and

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<sup>75</sup> USDA, *Your Livestock Can Survive*, 4.

<sup>76</sup> USDA, *Your Livestock Can Survive*, 6.



plants for decades.” Since it was “chemically similar to calcium,” it would contaminate “plants, particularly those growing in calcium- deficient soils.”<sup>77</sup>

If areas were highly contaminated with strontium, the USDA advised that the land might have to be taken “out of production for an indefinite period until the radioactivity decayed to a safe level.” However, if the land was not highly contaminated, the USDA advised farmers to treat the land with lime and fertilizer as well as to remove the contaminated vegetation or mulch. The pamphlet strongly recommended that if farmers had contaminated soil in regions where fields normally required lime or fertilizer for increased production, that the same application of lime or fertilizer could reduce strontium radiation “taken up by the plants... by as much as two-thirds.”<sup>78</sup>

Like many of the other civil defense pamphlets of the 1950s and 1960s, *Soil, Crops, and Fallout* continued to downplay the effects of radioactive fallout. Under a section entitled, “Decontaminating Harvested Crops,” the pamphlet suggested that if any crops had been covered with fallout particulates “the radioactive particulates can be removed in the same way as any other dust- by washing, vacuum cleaning, or brushing.” The pamphlet also recommended that for many contaminated food crops, that they would be “safe to use after washing” and depending on the food, “peeled.”<sup>79</sup> The idea that irradiated produce would be safe to eat after being washed and peeled is also found in a series of rural civil defense Public Service Announcements television ads produced by the U.S. Civil Defense Office from 1965, that claimed contaminated fruit, like an apple “would be perfectly safe to eat, if you just peel it”. However, the PSA warned viewers

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<sup>77</sup> U.S. Department of Agriculture, *Soil, Crops, and Fallout from Nuclear Attack* (Washington D.C.: U.S. Government Printing Office, 1962), 3.

<sup>78</sup> USDA, *Soil, Crops, and Fallout*, 5.

<sup>79</sup> USDA, *Soil, Crops, and Fallout*, 7.

that, “in disposing of the peelings, remember that they may still contain radioactive material.” The spot continued by reiterating the information found in *Soil Crops, and Fallout*, that fruits and vegetables would be safe to eat if they were properly washed and peeled.<sup>80</sup>

### **Gendered Division of Rural Civil Defense Tasks**

Many of the various tasks that the FCDA and USDA promoted to rural families on the ways that they could protect their family and livestock fell along gender lines. Like non-rural families, men were considered the head of the farm family. Tasks designed to protect the family and farm were generally understood to be men’s tasks. Illustrations that accompanied *Your Livestock can Survive Fallout* and *Soil, Crops and Fallout* showed male farmers carrying out any task that required manual labor such as harvesting crops in contaminated soil (Figures 1 and 2).<sup>81</sup>

For tasks that were more domestic in nature, such as stocking the family shelter with food, first aid, and other materials, or cooking with possibly contaminated foods, rural women were expected to be in control of these tasks as the farm’s homemaker. The information in *Soil, Crops and Fallout*, on how to remove fallout off contaminated produce and how to safely eat the produce as well as similar information from the television PSA were directed toward women. The cover of a USDA pamphlet, *Family Food Stockpile for Survival* showed a middle class woman happily stocking her family’s

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<sup>80</sup> [Rural Civil Defense TV Spots 1965] (1965), prod. Dept of Civil Defense, film, [http://archive.org/details/rural\\_civil\\_defense\\_tv\\_spots\\_1965](http://archive.org/details/rural_civil_defense_tv_spots_1965). 7:24-8:24.

<sup>81</sup> Federal Civil Defense Administration, *Rural Family Defense*, 1.; USDA, *Soil, Crops, and Fallout*, 5.

food pantry (Figure 3).<sup>82</sup> The USDA pamphlet informed its mostly female readers: “Every family should either build up and keep a 2-week supply of regular food in the home at all times or assemble and maintain a special 2-week stockpile of survival foods in the fallout shelter or home.” Inside the pamphlet, sample menus showed what foods would help extend the family’s food supply while providing variety to what the family ate during a two-week stay in a shelter.<sup>83</sup>

Home and emergency preparedness activities were also generally directed toward women. An update in the *Capital Press* from the Lane County Extension Agent reported: “Medical self help—the Civil Defense program that prepares a person to cope with emergency—is sweeping Lane County’s rural communities.” In Junction City, a small town north of Eugene, “Vard Nelson, Junction City Civil Defense director, is working with Mrs. Clark Hill; Mrs. Lester Wheeler, safety chairmen of the Junction City home extension unit; Mrs. Lois Stroda. Business and Professional Women representative; and Dr. Lee Harris in organizing classes.”<sup>84</sup> All of the people listed in the article, except for the civil defense director and doctor leading the class, were women who would pass along what they taught in the class to other women. Two of the women, Mrs. Lester Wheeler and Mrs. Lois Stroda, had connections with other organizations or clubs where the medical training would be passed on to other rural women in the community.

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<sup>82</sup> U.S. Department of Agriculture. *Family Food Stockpile for Survival*. Washington D.C. U.S. Government Printing Office, 1964, 1.

<sup>83</sup> USDA, *Food Stockpile for Survival*, 3-6.

<sup>84</sup> “Lane County Extension News.” *Capital Press*, November 30, 1962, 7.

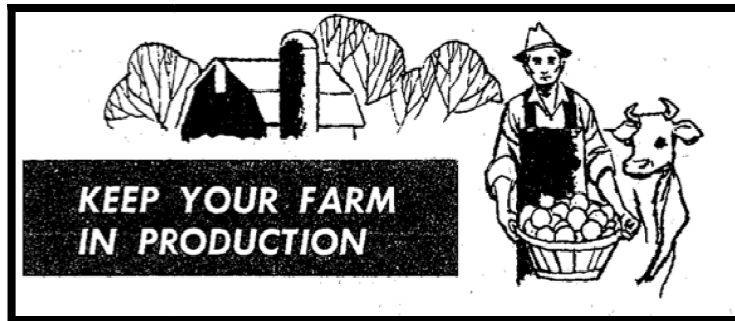


Figure 1: Heading from *Rural Family Defense* that shows a male farmer as the provider of the agricultural products that American farms produced.

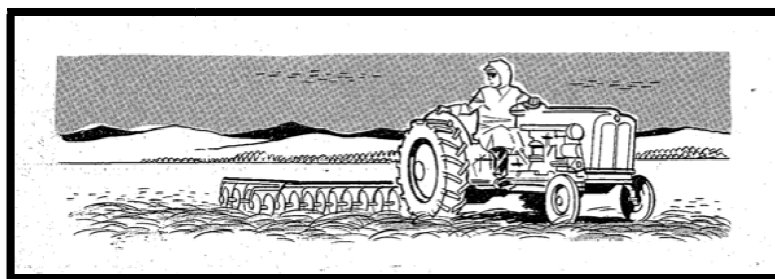


Figure 2: Illustration from *Soil, Crops and Fallout* that shows a male farmer tilling contaminated soil while wearing protective clothing.



Figure 3: Cover from the USDA pamphlet, *Family Food Stockpile for Survival*, that shows a middle class woman stocking a food pantry. Women generally handled tasks like ensuring that the family had a two-week supply of food in their family shelter and knowing how to process potentially contaminated foods.

## Regional Promotion of Rural Family and Livestock Fallout Shelters

Besides constructing or improvising a fallout shelter for their families, rural Americans were encouraged to provide fallout protection for their livestock and crops. A pamphlet published by the Iowa State Cooperative Extension Service in 1966 called *Protecting Family and Livestock From Nuclear Fallout*, showed farmers how they could build or modify structures to provide their livestock with fallout protection. The pamphlet provided charts that showed the amount of feed, water, and space would be needed for different animals over a two-week period. It also instructed farmers to consider whether they needed to consider “mechanical necessities, such as ventilation systems, emergency power generations, water pumps and maintenance.”<sup>85</sup> The Iowa State Cooperative Extension Service booklet advised that farmers modify their barns and outbuildings, with “reinforcing structures with more costly and labor-intensive material such as cement, sand and earth.”<sup>86</sup>

The Oregon State Cooperative Extension Service, administered through Oregon State University, established a rural civil defense program on December 1, 1962, weeks after the conclusion of the Cuban Missile Crisis that increased the nation’s interest in civil defense.<sup>87</sup> Over the decade, the rural civil defense program sponsored by the OSU Extension Service expanded across the Pacific Northwest. This regional rural civil defense program was terminated by the Defense Department after budget cuts in 1968 and as the nation’s view towards civil defense started to diminish. By the late 1960s and

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<sup>85</sup> Devine, 428

<sup>86</sup> Devine, 428.

<sup>87</sup> Extension Service Records, Special Collections & Archives Research Center, Oregon State University Libraries, Box 73 “Rural Civil Defense 1962-1964.”

early 1970s, Americans, as well as state and federal governments, started to lose faith in civil defense measures as a secure means of protection if the Soviets decided to attack. While the regional rural civil defense program was cut, the FES offered Oregon the opportunity to “continue the same Regional Coordinating responsibility for another program to be funded entirely” by the FES, in recognition of the leadership that the rural civil defense program in Oregon had on the Pacific Northwest. This allowed aspects of the rural civil defense program in Oregon to continue into the early 1970s. By 1971, the rural civil defense program in Oregon and the FES started to turn its focus away from just civil defense. Instead, the focus moved towards natural disasters and environmental concerns such as pollution.<sup>88</sup>

Even before the OSU Extension Service established the Rural Civil Defense program, the OSU Extension Service worked to ensure that farmers were aware of the need for civil defense in their rural region. In January 1961, J.W. Scheel, the Assistant Director of the Cooperative Extension Service at OSU, argued: “the Rural Civil Defense program has two main objectives... One, to inform rural families (both farm and non-farm) about the threat of radio active fallout and the defense against it.” While Scheel’s first point was educational in nature, his second point prompted male farmers to take direct responsibility for their family and livestock’s protection. Scheel argued that his second objective was to “induce them [farmers] to prepare family fallout shelters and take measures to protect their livestock.”<sup>89</sup>

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<sup>88</sup> Extension Service Records, Special Collections & Archives Research Center, Oregon State University Libraries, Box 73 “Rural Civil Defense 1965-1971”.

<sup>89</sup> “Extension Service Responsibilities in Civil Defense”, J.W. Scheel, Extension Service Records, Special Collections & Archives Research Center, Oregon State University Libraries, Box 73 “Rural Civil Defense 1962-1964.”

Despite only lasting six years, the rural civil defense program in Oregon and the FES attempted to promote the need for private shelters for rural Oregonians as well as shelters for their livestock. Unlike many other parts of the country, most houses in Oregon and the Northwest did not have a basement or form of cellar that were more common in the Midwest and rest of the nation. Without this basic form of shelter, rural Northwesters were advised to create their own fallout shelter and shield their livestock from fallout.

James J. McAlister, the rural defense specialist at OSU authored a three-page pamphlet entitled “Rural Defense” in which he explained the need for civil defense in rural areas. McAlister recognized that rural Oregonians might be reluctant to pursue expensive preparedness measures for their families and livestock when they lived in an isolated region. According to McAlister, “Planning for a disaster before it occurs seems to have very little popular appeal.” With little popular support, it was easy for emergency preparations to be “rationalized completely out of programs and activities.” McAlister attempted to change the minds of farm families and county extension agents who read his pamphlet. His first argument for the necessity of rural civil defense was that it prepared rural Oregonians for the worst-case scenario, and if a more likely disaster occurred-- such as floods and other natural disasters-- farmers would be better prepared. McAlister argued, “If people are prepared to survive this type of disaster” (a nuclear attack) “they can then survive any lesser disaster.”<sup>90</sup> McAlister’s second argument for reluctant farmers was that protecting their family and livestock could be done inexpensively and effectively.

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<sup>90</sup> “Rural Defense”, James J. McAlister. Extension Service Records, Special Collections & Archives Research Center, Oregon State University Libraries, Box 73 “Rural Civil Defense 1962-1964”

Logically it can be predicted that...farming areas would most likely not be a deliberate target. However, the peculiar characteristics of nuclear warfare makes the farmer as vulnerable as his city neighbor to the major nuclear menace known as fallout. In the face of such an overwhelming threat what can a farmer do? Fortunately, there are simple, inexpensive and effective counter measures which can be employed to reduce the hazard of radioactive fallout on the farm. These measures involve basically the shielding of people and livestock from harmful radiations.<sup>91</sup>

These “simple, inexpensive and effective counter measures” that McAlister recommended for farmers to protect their livestock included, “hay, grain, earth, cement, and rocks.” McAlister claimed that these would “provide low-cost effective shielding in existing farm shelters.”<sup>92</sup> McAlister’s insistence to make sure that farmers and county agents knew that fallout protection could be done inexpensively and effectively shows that farmers were not directly hesitant towards civil defense, but were instead hesitant in allocating funds on improvement that they believed would most likely not be necessary.

McAlister’s views on the effectiveness of rural civil defense in Oregon reveal some frustrations toward the FES and state government’s views on civil defense. According to McAlister, “Rural defense in the current Oregon situation has very little opportunity for success as a campaign program...Since Extension’s obligation to the people and the U.S. Department of Agriculture has not changed, the educational program must be adapted to overcome the barriers that exist.”<sup>93</sup>

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<sup>91</sup>McAlister, “Rural Defense”, Extension Service Records

<sup>92</sup> McAlister, “Rural Defense”, Extension Service Records

<sup>93</sup> “Rural Defense”, James J. McAlister. Extension Service Records



## **Local Promotion of Rural Family and Livestock Fallout Shelters in the Midwest**

States created and administered their own civil defense plans and offered varying levels of support for their rural inhabitants. However, these plans were useless unless farmers and county officials supported them. While farmers did not have much choice in their role with evacuation plans, they did have more control in their level of response toward fallout shelters.

Wabaunsee County is a rural county in Northeast Kansas situated between Topeka, Junction City, and Manhattan, Kansas. The county provides an example of a rural county promoting home shelters over public fallout shelters. Located about forty miles west from the state capital of Topeka, Wabaunsee County provided only five public shelters for the county's roughly 6500 residents. Four of the five shelters were in the county seat of Alma (Wabaunsee County Courthouse, City Hall, Rural High School, and Rural High School Gym), and the final shelter was in Harveyville (Rural High School), over thirty miles away from the other public shelters.<sup>94</sup> The Wabaunsee County Commissioners noted in 1970 that there were only 744 public shelter spaces. In addition to the public shelter spaces, the county commissioners noted that there were "available home shelter spaces for approximately 3,966 persons" which left "a shortage of approximately 1,938 shelter spaces for Wabaunsee County."<sup>95</sup> They also noted that the public shelter spaces were located in Alma and Harveyville and that "rural areas are

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<sup>94</sup> County Commissioners of Wabaunsee County, Kansas. *Emergency Disaster Information for The Citizens of Wabaunsee County*. Alma, Ks, 1970.

<sup>95</sup> *Emergency Disaster Information for The Citizens of Wabaunsee County*.

urged to improvise home shelter. Everyone with a basement should use it as their shelter and are encouraged to invite their neighbors to share it.”<sup>96</sup>

Like much of the Midwest, many residents in Wabaunsee County had some sort of an underground cellar that could easily be altered to work as a fallout shelter. An article in a 1962 edition of *Nebraska Farmer* showed that these cellars could be used as a fallout shelter with few changes. "Most farms already have shelters in the form of storm caves and potato cellars. It's just another step to prepare them for protection against radioactive fallout. Many of these are already being cleaned up and stocked with food according to civil defense recommendations. Little effort and expense are required to make almost any home offer some degree of fallout protection."<sup>97</sup>

With a majority of their constituents living in a rural area and small towns, the Wabaunsee County Commissioners also discussed protecting livestock from any fallout radiation. However, they did not mention or recommend that buildings be reinforced. Instead, they followed advice similar to the recommendations from McAlister:

You should place as many of your livestock and as much feed as possible in barns or other covered buildings. A full hayloft affords some shielding from fallout radiation for animals housed below. Any hay, feed or grain you cannot get into barns should be covered... Exposure to radiation harms only living creatures. Therefore if food, water, ect., is covered in such a way that it cannot be contaminated by fallout dust or particles it will be safe for consumption.<sup>98</sup>

The Wabaunsee County Commissioners also provided the residents of the county information on how to properly slaughter any livestock after a nuclear attack. They stated: “Animals which have grazed on contaminated pastures should be slaughtered and

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<sup>96</sup> *Emergency Disaster Information for The Citizens of Wabaunsee County.*

<sup>97</sup> "The Family Fallout Shelter: Rural Fallout Shelters." NebraskaStudies.Org. Accessed May 04, 2013. [http://www.nebraskastudies.org/0900/frameset\\_reset.html?http://www.nebraskastudies.org/0900/stories/0901\\_0133.html](http://www.nebraskastudies.org/0900/frameset_reset.html?http://www.nebraskastudies.org/0900/stories/0901_0133.html).

<sup>98</sup> *Emergency Disaster Information for The Citizens of Wabaunsee County.*

muscle meat would be fit for human consumption. However, internal organs... should not be eaten.” They also noted: “If the radiation level in your area indicates that animal sickness may be widespread, you probably will be given instructions on slaughtering. Care must be taken in slaughtering to prevent contamination of the carcass by fallout particles.”<sup>99</sup> Citing the information found in *Your Livestock Can Survive Fallout* nearly verbatim, the County Commissioners advised that Wabaunsee residents raise chickens. Since the birds would be “a particular important direct food resource because they are relatively resistant to radiation, especially if they are raised under cover, using safe packaged feeds.”<sup>100</sup> Finally, the County Commissioners advised that, “Milk from cows that have grazed on contaminated pastures would be harmful, especially to children. Therefore, alternate milk sources (such as canned or powdered milk, or milk from fallout-free areas) should be used for the first few weeks following fallout.”<sup>101</sup>

However, while Wabaunsee County made recommendations to its rural citizens on some inexpensive preparations they could do to protect themselves and their families, a dairy in Nebraska went further. The Roberts Dairy Company outside of Omaha constructed an underground fallout shelter that was designed to hold over 200 Guernsey cows, two bulls, and up to fifteen farm hands. The shelter’s existence soon garnered international attention. In October 1969, *The Tuscaloosa News* republished a story that originally appeared in *The London Sunday Times* on the shelter. The article’s author, Philip Clarke, argued, “In Omaha, home of America’s Strategic Air Command, they take both world defense and the milk supply very seriously.”<sup>102</sup> Picking up on the USDA and

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<sup>99</sup> *Emergency Disaster Information for The Citizens of Wabaunsee County.*

<sup>100</sup> *Emergency Disaster Information for The Citizens of Wabaunsee County.*

<sup>101</sup> *Emergency Disaster Information for The Citizens of Wabaunsee County.*

<sup>102</sup> Philip Clarke. “Fallout Shelter Built for Cows in Nebraska.” *Tuscaloosa News; London Sunday Times*, October 26, 1969, 19.

FCDA's theme of maintaining the nation's food supply in the event of an attack the dairy's general safety supervisor, Ed Anderson remarked, "What's the use of having a lot of live people left after a nuclear attack if we can't feed them?"<sup>103</sup> The article also took the time to show readers in both the United Kingdom and the United States, that the Roberts Dairy was a strong proponent of the Cold War. On the shelter's large 14-foot door a sign read, "War. Sacrifice for the USA, Suicide for the USSR, nonsense for everybody." (Figure 4)<sup>104</sup> Even the shelter's manure drainage system provided the Roberts Dairy the opportunity to send the Soviet Union a not so subtle message as the drainage system sloped from West to East.<sup>105</sup>

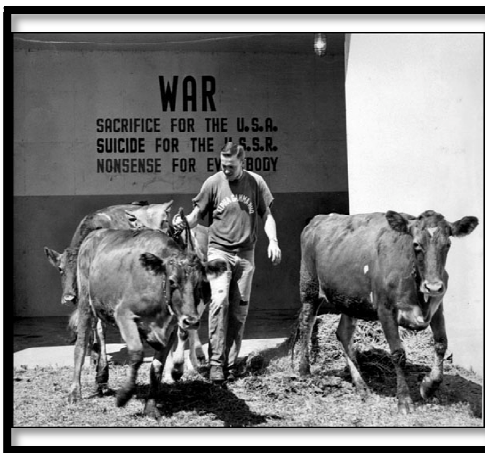


Figure 4: The main entrance to the Roberts Dairy fallout shelter.

### Local Promotion of Rural Family and Livestock Fallout Shelters in the Northwest

The Robert's Dairy slight jab at the USSR was not the only attempt at rural civil defense that looked at the ways that animal waste could be used to protect farms in a

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<sup>103</sup> Clark, "Fallout Shelter Built for Cows in Nebraska."

<sup>104</sup> *1963\_Fallout\_Cows*. 1963. The World Herald, Omaha. [http://blogs.omaha.com/2012/11/11/from-the-archives-the-cold-war/1963\\_fallout\\_cows/](http://blogs.omaha.com/2012/11/11/from-the-archives-the-cold-war/1963_fallout_cows/).

<sup>105</sup> Clark, "Fallout Shelter Built for Cows in Nebraska."

metaphorical or literal way. One of the projects that the OSU Rural Civil Defense program sponsored looked at the feasibility of using common agricultural products, including liquid manure, to wash fallout particles off the roofs of dairy barns by using a pump and sprinkler system. The “Engineering Report to Determine the Feasibility of Using Agricultural Commodities and Decontamination Procedures to Upgrade Dairy Structures” project, sponsored by the OSU Extension Service Agricultural Engineer, Walter Matson attempted to “determine if dairy structures in Western Oregon, Washington and California could be converted into suitable fallout shelters in the event of nuclear fallout.” These dairy facilities on the western halves of Washington, Oregon and California produced “approximately 80%” of the region’s “dairy products...about 8 billion pounds of milks for 18 billion people.”<sup>106</sup>

Matson saw one principle problem with the design of dairy barns and their use as suitable shelter for livestock in the event of an attack. Matson reported: “The primary problem in providing fallout shelter protection under a dairy structure as investigated in this report is the reduction of the overhead contribution of gamma radiation. A solution for this problem is to use a decontamination agent on the roof. The two liquids available on dairy farms are water and liquid manure.”<sup>107</sup> However, Matson acknowledged that this study was a first look at using either water or liquid manure to reduce gamma radiation on dairy barn roofs. Matson argued: “The use of liquid manure as a decontaminations agent requires research data prior to make recommendations for its use.”<sup>108</sup>

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<sup>106</sup>“*Engineering Report to Determine the Feasibility of Using Agricultural Commodities and Decontamination Procedures to Upgrade Dairy Structures*”, Walter E. Matson Extension Service Records, Special Collections & Archives Research Center, Oregon State University Libraries, Box 73 “Rural Civil Defense 1965-1971.

<sup>107</sup> Matson, “*Engineering Report to Determine the Feasibility of Using Agricultural Commodities*”, Extension Service Records.

<sup>108</sup> Matson, “*Engineering Report to Determine the Feasibility of Using Agricultural Commodities*”, Extension Service Records.

While basements or cellar shelters were not often possible in the Western half of Oregon, where wet winters would have been more like to flood or damaged any underground structure, cellar shelters were a plausible option in the drier Eastern half of the state. Matson reported in a biannual report to the USDA in 1967 that he and others involved in rural civil defense had been active throughout 1967 finding fallout shelters across the state. In Malheur County in Southeastern Oregon, a county agent had found that potato cellars could be used as shelters. According to Matson, the county agent had “observed various structures that might provide fallout shelter. If a structure seemed feasible, he reported his findings to the County CD Director... In the last year, Malheur County has increased its number of public fallout shelters in rural areas by 1,056 spaces.”<sup>109</sup>

### **Radiation Education for Rural Northwest Families**

Another aspect of the OSU Extension Service Rural Civil Defense program was promoting the education of rural Oregonians about the dangers of fallout. While the OSU extension service worked to educate farmers about the effects of nuclear technology on their livestock and crops as well how to prepare against it, Oregon 4-H attempted to educate the next generation of Oregon farmers. 4-Hers participated in “The 4-H TV Action Series” which included, “ ten, thirty-minute television programs on the subject of emergency preparedness.”<sup>110</sup> As an attempt to teach 4-H’ers about radiation, Rural Civil Defense Specialist, Ellwood D. Miller conducted an “Atomic Easter Egg Hunt” at several

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<sup>109</sup> “Rural Civil Defense Narrative Report July1- December 31, 1967”, Extension Service Records, Special Collections & Archives Research Center, Oregon State University Libraries, Box 73 “Rural Civil Defense Reports, Records, and Memorandas 1963-1976.”

<sup>110</sup> “Rural Civil Defense Narrative Report July1- December 31, 1967”, Extension Service Records.

county 4-H summer camps. The 1967 report noted that over 500 children aged nine to fourteen had the opportunity to receive “information about radioactivity and resulting radiation hazards.” After receiving a lecture from Miller the children went on their “Atomic Easter Egg Hunt.” The report explained that:

The campers were divided into teams of two or threes and each team was given a geiger counter... The team disassembled the instrument, installed batteries, and performed an operational check. Prior to the beginning of the instructional period, the RCD Specialist distributed four sources of uranium within the confines of well-marked boundaries. These radioactive sources were the atomic easter eggs. It was the object of the team with their instrument to discover the easter egg using the radiation given off of the sources of uranium. The rate of radiation being given off by the source was comparable to the rate from the dial of an illuminate wristwatch.<sup>111</sup>

The Rural Civil Defense program also worked to educate local farmers about the basics of fallout and radiation. In 1965, the Rural Civil Defense program requested funds from the FES to pursue a project that would use “self-teaching devices” to educate rural Oregonians about the “basics of nuclear physics.” The project argued that, “The use of self-teaching devices can cause increased understanding of basic [nuclear] concepts, arouse interest in the subject matter, and provide a common knowledge level for conference and workshop participants.” Additionally, “This teaching device could be utilized through all levels of the Extension program. ... Many rural people who work with Extension agents prefer to work independently rather than attend meetings. This method of instruction would aid them in securing the basic information needed to understand other Rural Civil Defense publications.”<sup>112</sup> The OSU Extension Service

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<sup>111</sup> “Rural Civil Defense Narrative Report July 1- December 31, 1967”, Extension Service Records.

<sup>112</sup> “Proposed Rural Civil Defense Special Project,” Extension Service Records, Special Collections & Archives Research Center, Oregon State University Libraries, Box 73 “Rural Civil Defense Reports, Records, and Memorandas 1963-1976.”

hoped that by educating local farmers and their families they would be able to increase the amount of awareness that these people had toward civil defense.

While the Extension Service Records do not show if the ‘self teaching’ program ever received funds from the FES, education about the dangers of fallout and the need for protection from it did make its way to County agents who passed their knowledge along to local farmers. One success story that the Rural Civil Defense program made sure to include in their report to the USDA from the first half of 1966 highlighted a recent event between the Clackamas County Extension Agent and a group of three farmers. The report excitedly noted that the example showed, the “tremendous interest that farmers can have in emergency preparedness if they understand just enough about it to be able to discuss i[t] intelligently.”<sup>113</sup> The report explained that:

Clayton Wills, Clackamas county extension agent, invited three farmers to a USDA Defense Board meeting. His purpose was to acquaint them with emergency preparedness and ask them for advice on how to incorporate this into the on-going extension program in Clackamas country. The film "Radiation Effects on Farm Animals" was shown to the group and a brief discussion was presented on shelter for livestock and poultry. The three farmers asked questions and discussed emergency preparedness for two and one-half hours. They were thoroughly interested and wanted to develop plans on their own farms immediately. No scare tactics were used, but facts were presented and the farmers responded to these facts.<sup>114</sup>

The example from Clackamas County showed that farmers could be encouraged through educational tactics to increase their level of emergency preparedness by enacting, or promising to enact, rural civil defense measures on their property. However, most of the measures that were enacted across the state followed the recommendations from McAlister—simple and inexpensive measures. The effectiveness of these measures,

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<sup>113</sup> “Rural Civil Defense Progress Report January 1 – June 30, 1966”, Extension Service Records,

<sup>114</sup> “Rural Civil Defense Progress Report January 1 – June 30, 1966”, Extension Service Records,



luckily, was never put to the test, so the amount of protection that shielding livestock and rural families with common agricultural and natural materials from radioactive fallout was not tested.

## **Conclusion**

Throughout the Cold War, the threat of a Soviet nuclear attack created a justified fear. This fear caused the spread of civil defense information across the country that worked its way down from the federal government, to state civil defense agencies, and finally made its way to individual rural Americans. However, while the majority of Americans did live in urban regions of the nation, the federal government expected rural Americans to bear the burden of caring for urban evacuees as well as providing protection for their own families and their livelihood, crops and livestock. This placed a logistical, moral, and financial burden on to the nation's farmers and other rural Americans.

Throughout the 1950s when evacuation plans constituted the majority of the nation's civil defense plan, the federal government expected rural families to be willing and able to provide for urban evacuees. However, the federal government often ignored the idea that rural Americans would not have all of the space, food, water or other materials to provide for a large temporary group of people. Evacuation plans also often to take into consideration the different political and cultural views of rural and urban Americans. Fears over what could happen if large urban centers that including a wide

variety of minorities were placed in mostly white and conservative rural regions were mostly ignored by the FCDA and other civil defense agencies.

At the regional level evacuation plans, again focused on the needs of the evacuating urban populations and not of the needs that the rural populations would need to care for the evacuees. Extensive evacuation plans developed in Nebraska and Oregon, created detailed plans on the evacuation of each state's main targets. However, in each state, the evacuation plan provided little information to rural residents on how they were expected to provide goods and services to the evacuees. In Oregon, the only information that was directed towards rural Oregonians came from the *Capital Press*, in one article that detailed where evacuating Portlanders would be transported to in the aftermath of an attack if one occurred. While the state's civil defense director acknowledged that rural Oregonians and small towns in the state would be essential if Portland were attacked, Sheets gave little information to the *Capital Press*'s readers how they were to provide basic services or how they were suppose to pay for the services.

By the early 1960s, fallout shelters replaced evacuation as the nation's primary civil defense measure. As evacuation plans, like the ones established in Nebraska and Oregon, showed the ridiculousness of moving an entire urban population out of a city and into rural regions that were still threatened by fallout, civil defense measures moved to fallout shelters. All across the nation, the FCDA urged family fallout shelters as a way to ensure that the nation would not fall apart as families and communities banded together in fallout shelters. The militaristic like tasks that the FCDA focused on militarized the American family, according to McEnaney. The regimental nature of civil defense tasks also extended towards rural families as they incorporated the general policies towards

American families and policies that focused on especially rural concerns of providing shelter for livestock. Like the rest of the country, rural civil defense tasks were divided between men and women. As the head of the farm family, male farmers took on civil defense measures that worked to ensure the protection of their family, land, and livestock from fallout. Rural and non-rural women alike took on similar tasks in regards to civil defense. Rural women did domestic tasks such as ensuring that the farm family had a two-week supply of food in the family shelter and knowing how to prepare potentially irradiated produce. Home and emergency preparedness tasks, such as first aid, were also in the domain of rural women's civil defense tasks.

Regional attempts to provide education about fallout and promoting rural Midwesterners and Northwesterners to provide shelter for their families and livestock often fell to State Extension Services. In the Midwest, states like Nebraska and Iowa encouraged their rural residents to alter their storm cellars into fallout shelters. In Iowa the Iowa State Cooperative Extension Service, produced a pamphlet geared towards showing rural Iowans how they could build fallout shelters for their livestock. In Oregon, the OSU Extension Service sponsored a Rural Civil Defense program that attempted to educate rural Oregonians and Northwesterners about the fallout threat that they faced. The Rural Civil Defense program also worked to find inexpensive and effective ways to shelter rural families and their livestock from fallout.

Local attempts from the OSU Rural Civil Defense program provided education about fallout, radiation and ways to protect families and livestock from fallout. The Rural Civil Defense program attempted to create 'self-teaching devices' to educate farmers about the danger that fallout posed to them. When local Extension Agents were able to

educate farmers about fallout, they reported success in generating positive views towards civil defense amongst rural Oregonians. Education about fallout also extended towards the next generation of Oregon farmers by targeting 4-H'ers at summer camp activities like the "Atomic Easter Egg Hunt."

Despite regional differences, including population and military or nuclear sites, the rural Americans who lived in the Midwest and Northwest during the Cold War often approached rural civil defense measures in similar ways. In both Nebraska and Oregon, evacuation plans focused on the concerns of urban populations and mostly ignored the concerns of rural Nebraskans and Oregonians. While the FCDA and USDA promoted rural Americans to take proactive measures to ensure the nation's food supply, most rural Americans did not have the funds to build extensive fallout shelters for their family or livestock. Most rural Americans in the Midwest and Northwest looked for inexpensive and creative ways to provide shielding for their family and livestock. Some of these measures included altering a previously established storm cellar into a fallout shelter. Other measures included looking at the possibility of using water or liquid manure to decontaminate the roofs of dairy barns. However, while most rural Americans in the Midwest and Northwest looked for inexpensive ways to provide some protection for their family or livestock, the Roberts Dairy Farm created an underground fallout shelter that was large enough to hold 200 cattle and fifteen farm hands for a two-week period. Despite facing federal civil defense policies that requested that rural Americans take a high responsibility in ensuring their own protection and the protection of the livestock and crops, many rural Americans in the Midwest and Northwest found creative ways to ensure that they protected their families and the nation's food supply.

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